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 10 <151> 2003-08-14
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25	Arg Tyr Phe Thr Arg Pro Val Thr Gly Ala Thr Ser Gly Ala Leu Gly	115	120 125
30	Ala Ile Ile Val Ala Phe Leu Ala Gly Met Phe Arg Val His Pro Thr	130	135 140
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5 Arg Leu Ile Thr Ile Asp Ala Arg Thr Gly Gln Ala Cys Thr Asp Phe
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100	ccgccccct cgtggcgggt gacatcgtgg tcgtcggcgg ccgcatcgcc gataacgagc		480
105	gcacaggcga gccttcggc gtcgtccgcg gctacgacgt ccgcaccggc gcacaggtct		540
110	gggcctggga cgccaccaac ccgcatcgcg gcaccacacc actggccgaa ggcgagatct		600
115	accccgccga aaccccccaac atgtggggca ccgccagcta cgacccgaaa ctcaacctcg		660

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<211> 252

<212> PRT

<213> Acetobacter sp. ATCC 15164

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20 25 30

20

Gly Asp Thr Val Tyr Ile Cys Ser Pro His Asn Ile Val Ser Ala Leu
35 40 45

25

Asp Pro Asp Thr Gly Thr Glu Lys Trp Lys Phe Asp Pro His Ala Gln
50 55 60

30

Thr Lys Val Trp Gln Arg Cys Arg Gly Val Gly Tyr Trp His Asp Ser
65 70 75 80

35

Thr Ala Thr Asp Ala Asn Ala Pro Cys Ala Ser Arg Ile Val Leu Thr
85 90 95

Thr Ile Asp Ala Arg Leu Ile Thr Ile Asp Ala Arg Thr Gly Gln Ala
100 105 110

40

Cys Thr Asp Phe Gly Thr Asn Gly Asn Val Asn Leu Leu Thr Gly Leu
115 120 125

45

Gly Pro Thr Ala Pro Gly Ser Tyr Tyr Pro Thr Ala Ala Pro Leu Val
130 135 140

50

Ala Gly Asp Ile Val Val Val Gly Gly Arg Ile Ala Asp Asn Glu Arg
145 150 155 160

Thr Gly Glu Pro Ser Gly Val Val Arg Gly Tyr Asp Val Arg Thr Gly
165 170 175

55

Ala Gln Val Trp Ala Trp Asp Ala Thr Asn Pro His Arg Gly Thr Thr
180 185 190

Pro Leu Ala Glu Gly Glu Ile Tyr Pro Ala Glu Thr Pro Asn Met Trp
195 200 205

5 Gly Thr Ala Ser Tyr Asp Pro Lys Leu Asn Leu Val Phe Phe Pro Leu
210 215 220

10 Gly Asn Gln Thr Pro Asp Phe Trp Gly Gly Asp Arg Ser Lys Ala Ser
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15 Asp Glu Tyr Asn Asp Ala Phe Val Ala Val Asp Ala
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30 <210> 24
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35 <220>
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50 <400> 25
gcacgctcga caactatgtc 20

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<400> 26

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	ggggccacct ccggcgact cgccgcatc atcgtggctt tctcgcgcg catgttcgg	420
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25 <212> PRT

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<400> 27

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40 Leu Gly Gly Ser Trp Phe Tyr Thr Leu Ala Gly Ile Ala Leu Ala Ala
 35 40 45

45 Ser Ser Val Tyr Met Ile Arg Arg Asn Ile Leu Ser Thr Trp Ile Ala
 50 55 60

50 Leu Gly Leu Leu Val Ala Thr Ala Leu Trp Ser Leu Ala Glu Val Gly
 65 70 75 80

55 Thr Ser Phe Trp Pro Ser Phe Ser Arg Leu Ile Val Phe Leu Cys Val
 85 90 95

60 Ala Leu Ile Ala Thr Leu Met Ala Pro Trp Leu Ser Gly Pro Gly Arg
 100 105 110

65 Arg Tyr Phe Thr Arg Pro Val Thr Gly Ala Thr Ser Gly Ala Leu Gly
 115 120 125

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	355	360	365
5	Ala Trp Asp Ala Thr Asn Pro His Arg Gly Thr Thr Pro Leu Ala Glu 370 375 380		
10	Gly Glu Ile Tyr Pro Ala Glu Thr Pro Asn Met Trp Gly Thr Ala Ser 385 390 395 400		
15	Tyr Asp Pro Lys Leu Asn Leu Val Phe Phe Pro Leu Gly Asn Gln Thr 405 410 415		
20	Pro Asp Phe Trp Gly Gly Asp Arg Ser Lys Ala Ser Asp Glu Tyr Asn 420 425 430		
25	Asp Ala Phe Val Ala Val Asp Ala Lys Thr Gly Asp Glu Arg Trp His 435 440 445		
30	Phe Arg Thr Ala Asn His Asp Leu Val Asp Tyr Asp Ala Thr Ala Gln 450 455 460		
35	Pro Ile Leu Tyr Asp Ile Pro Asp Gly His Gly Gly Thr Arg Pro Ala 465 470 475 480		
40	Ile Ile Ala Met Thr Lys Arg Gly Gln Ile Phe Val Leu Asp Arg Arg 485 490 495		
45	Asp Gly Thr Pro Ile Val Pro Val Glu Met Arg Lys Val Pro Gln Asp 500 505 510		
50	Gly Ala Pro Glu His Gln Tyr Leu Ala Pro Glu Gln Pro Tyr Ser Ala 515 520 525		
55	Leu Ser Ile Gly Thr Glu Arg Leu Lys Pro Ser Asp Met Trp Gly Gly 530 535 540		
	Thr Ile Phe Asp Gln Leu Leu Cys Arg Ile Gln Phe Ala Ser Tyr Arg 545 550 555 560		
	Tyr Glu Gly Glu Phe Thr Pro Val Asn Glu Lys Gln Ala Thr Ile Ile 565 570 575		
	Tyr Pro Gly Tyr Tyr Gly Gly Ile Asn Trp Gly Gly Gly Ala Val Asp 580 585 590		

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Glu Ser Thr Gly Thr Leu Leu Val Asn Asp Ile Arg Met Ala Gln Trp
 595 600 605

5 Gly Lys Phe Met Lys Gln Glu Glu Ala Arg Arg Ser Gly Phe Lys Pro
 610 615 620

10 Ser Ser Glu Gly Glu Tyr Ser Glu Gln Lys Gly Thr Pro Trp Gly Val
 625 630 635 640

15 Val Arg Ser Met Phe Phe Ser Pro Ala Gly Leu Pro Cys Val Lys Pro
 645 650 655

Pro Tyr Gly Thr Met Asn Ala Ile Asp Leu Arg Ser Gly Lys Val Lys
 660 665 670

20 Trp Ser Met Pro Leu Gly Thr Ile Gln Asp Met Pro Val His Gly Met
 675 680 685

25 Val Pro Gly Leu Ala Ile Pro Leu Gly Met Pro Thr Met Ser Gly Pro
 690 695 700

30 Leu Ala Thr His Thr Gly Leu Val Phe Phe Ser Gly Thr Leu Asp Asn
 705 710 715 720

35 Tyr Val Arg Ala Leu Asn Thr Asp Thr Gly Glu Val Val Trp Lys Ala
 725 730 735

Arg Leu Pro Val Ala Ser Gln Ala Ala Pro Met Ser Tyr Met Ser Asp
 740 745 750

40 Lys Thr Gly Lys Gln Tyr Ile Val Val Thr Ala Gly Gly Leu Thr Arg
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45 Ser Gly Val Asp Lys Asn Arg Gly Asp Tyr Val Ile Ala Tyr Ala Leu
 770 775 780

50 Pro Ser Glu Glu
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